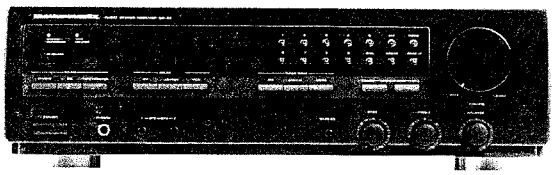
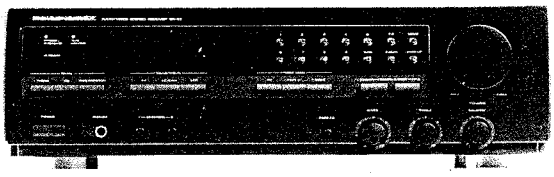
Service Manual

74 SR53 / 01B/02B/05B/01G/02G
74 SR63 / 01B/02B/01G/02G
Audio / Video stereo receiver





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marantz®

model SR-53/SR-63

First issue : 1993

A.O

4822 725 51036

PCS 71 227

MARANTZ DESIGN AND SERVICE

Using superior design and selected high grade components, MARANTZ company has created the ultimate in stereo sound. Only **original MARANTZ parts** can insure that your MARANTZ product will continue to perform to the specifications for which it is famous.

Parts for your MARANTZ equipment are generally available at our National Marantz Subsidiary or Agent.

MARANTZ EUROPE B.V.
P.O. Box 80002
Building SFF 2
5600 JB Eindhoven
The Netherlands
Phone : +31-40-732241
Fax : +31-40-735578

ORDERING PARTS

Parts can be ordered either by mail or by telex. In both cases, the correct part number has to be specified. The following information must be supplied to eliminate delays in processing your order:

1. Complete address
2. Complete part numbers and quantities required
3. Description of parts
4. Model number for which the part is required
5. Way of shipment
6. Signature: any order form or telex must be signed, otherwise such part order will be considered as null and void.

ADDRESSES

AUSTRALIA
MARANTZ AUSTRALIA
Figtree Drive
Australia Centre
Homebush, NSW 2140
AUSTRALIA

AUSTRIA
MARANTZ
Hietzinger Kai 137a
1130 Wien
Austria

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P.O.Box 80002
Building SFF 2
5600 JB Eindhoven
The Netherlands

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Casilla 2687
Santiago
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Denmark

FINLAND
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00520
Helsingfors 52
Finland

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92600 Asnières
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U.K.

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P.O.Box 21025
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Athens 11471
Greece

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MARANTZ ITALIANA SPA
Piazza IV Novembre 3
20124 Milano
Italy

JAPAN
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35-1, 7-chome, Sagamiono
Sagamihara-shi, Kanagawa
Japan

KUWAIT
AL ALAMIAH ELECTRONICS
P.O.Box 8196
Salmiah
22052 Kuwait

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MARANTZ EUROPE B.V.
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Postboks 7034
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3007 Drammen
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211-2 Esq.
1200 Lisboa
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AL ALAMIAH ELECTRONICS
P.O.Box 5954
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MARANTZ S.A.
10 Bond Street
Randburg 2194
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Johannesburg 2000
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Martinez Villergas 2
Apartado 2065
Madrid 28027
Spain

SWEDEN
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Box 1324
17125 Solna
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Postfach
8010 Zürich-Müllingen
Switzerland

TRADING
MARANTZ TRADING
P.O.Box 20008
Building SFF 2
5600 JB Eindhoven
The Netherlands

All of the above locations are fully equipped to take care of your total service needs or can advice you. Because various countries have differing configuration requirements, it is necessary that you contact the service facility in your particular country. In the event that there is no service location listed for your country, please contact the nearest facility for the necessary assistance.

In case of difficulties, do not hesitate to contact the Technical Department at above mentioned address.

TECHNICAL SPECIFICATIONS (DIN)

(SR-53)

FM TUNER SECTION

Frequency range	87.5 – 108 MHz
Sensitivity DIN (Mono/Stereo)	1.0/25 µV
S/N (Mono/Stereo)	76/68 dB
T.H.D.	0.2/0.4%
Selectivity at 98 MHz (±300 kHz)	60 dB

MW TUNER SECTION

Frequency range	531 – 1602 kHz
Sensitivity (S/N 20 dB 30% 1 MHz)	500 µV
S/N at 1 MHz	50 dB

LW TUNER SECTION (Only scan step switch 9 kHz for /01 version)

Frequency range	152 – 282 kHz
Sensitivity (S/N 20 dB 30% 1 MHz)	1000 µV

AMPLIFIER SECTION

Power output	DIN 8Ω	50W
	RMS 8Ω	40W
T.H.D. at 8Ω rated RMS output		0.09%
Damping factor		50
Input sensitivity	: PHONO	3.5 mV/47 kΩ
	: CD/TV/CDV/VCR/TAPE	220 mV/47 kΩ
S/N (IHF-A)	: PHONO	76 dB
	: CD/TV/CDV/VCR/TAPE	86 dB

POWER SUPPLY

/02 version	AC 230V, 50 Hz
/01 version (4 voltages)	110/120/220/240V AC, 50/60 Hz
/05 version	AC 240V, 50 Hz

DIMENSIONS

Width	420 mm
Height	132 mm
Depth	334 mm

WEIGHT ..... 6.5 kg

SUPPLIED ACCESSORIES

Remote controller (RC-60SR) x 1
Batteries (Size "AAA", R03) x 2
FM dipole antenna x 1
AM loop antenna x 1

Specifications subject to change without prior notice.

TECHNICAL SPECIFICATIONS (DIN)

(SR-63)

FM TUNER SECTION

Frequency range	87.5 – 108 MHz
Sensitivity DIN (Mono/Stereo)	1.0/25 µV
S/N (Mono/Stereo)	78/70 dB
T.H.D.	0.1/0.2%
Selectivity at 98 MHz (±300 kHz)	65 dB

MW TUNER SECTION

Frequency range	531 – 1602 kHz
Sensitivity (S/N 20 dB 30% 1 MHz)	500 µV
S/N at 1 MHz	50 dB

LW TUNER SECTION (Only scan step switch 9 kHz for /01 version)

Frequency range	152 – 282 kHz
Sensitivity (S/N 20 dB 30% 1 MHz)	1000 µV

AMPLIFIER SECTION

Power output	DIN 4Ω	90W
	DIN 8Ω	75W
	RMS 8Ω	70W
IHF Dynamic power 8Ω/4Ω		100/140W
T.H.D. at 8Ω rated RMS output		0.07%
Damping factor		70
Input sensitivity	: PHONO	3.5 mV/47 kΩ
	: CD/TV/CDV/VCR/TAPE	220 mV/40 kΩ
S/N (IHF-A)	: PHONO	75 dB
	: CD/TV/CDV/VCR/TAPE	82 dB
Video level/impedance		1 Vp-p/75Ω

POWER REQUIREMENTS

/02 version	230V AC, 50 Hz
/01 version (4 voltages)	110/120/220/240V AC, 50/60 Hz

DIMENSIONS

Width	420 mm
Height	132 mm
Depth	334 mm

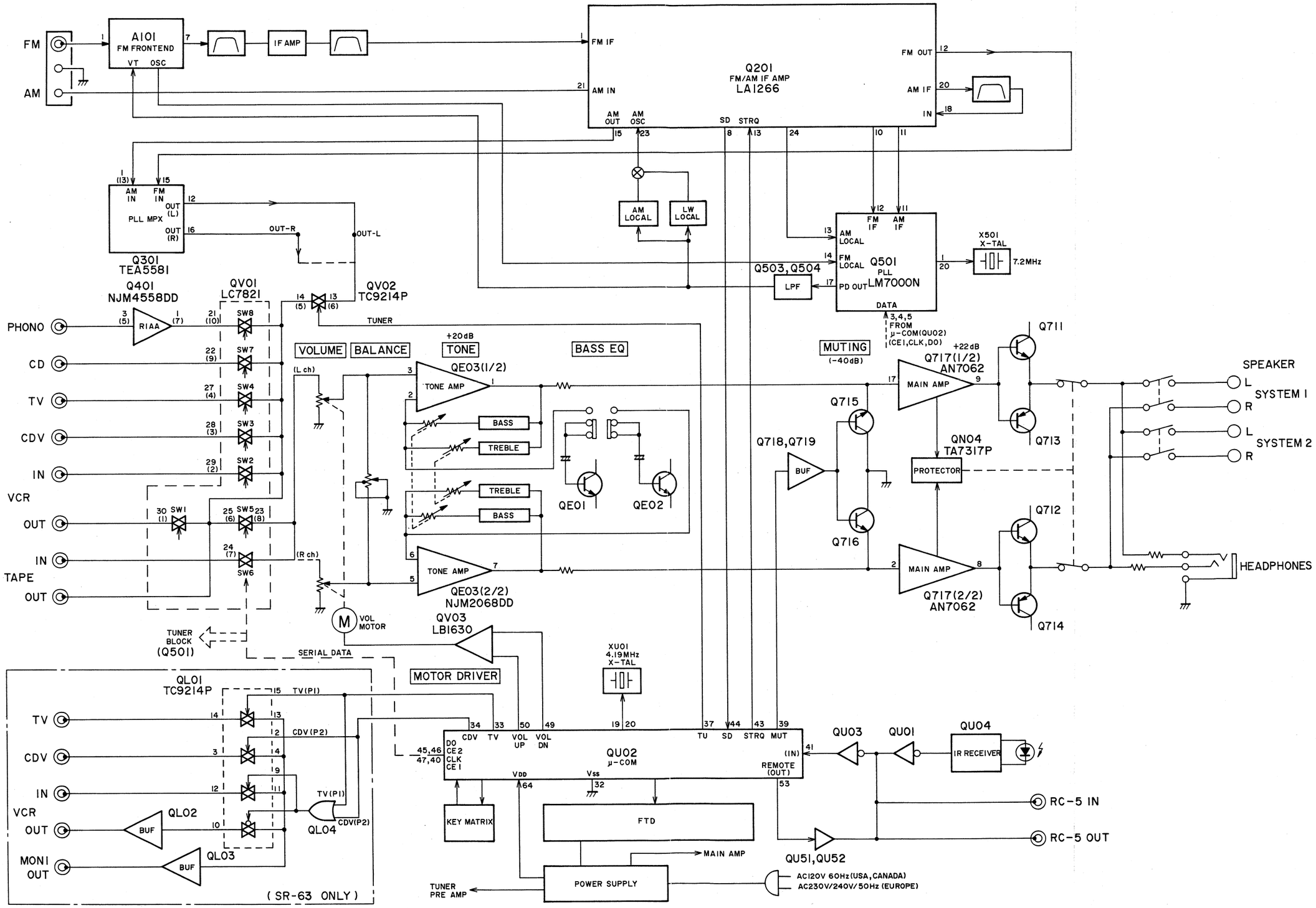
WEIGHT ..... 7.6 kg

SUPPLIED ACCESSORIES

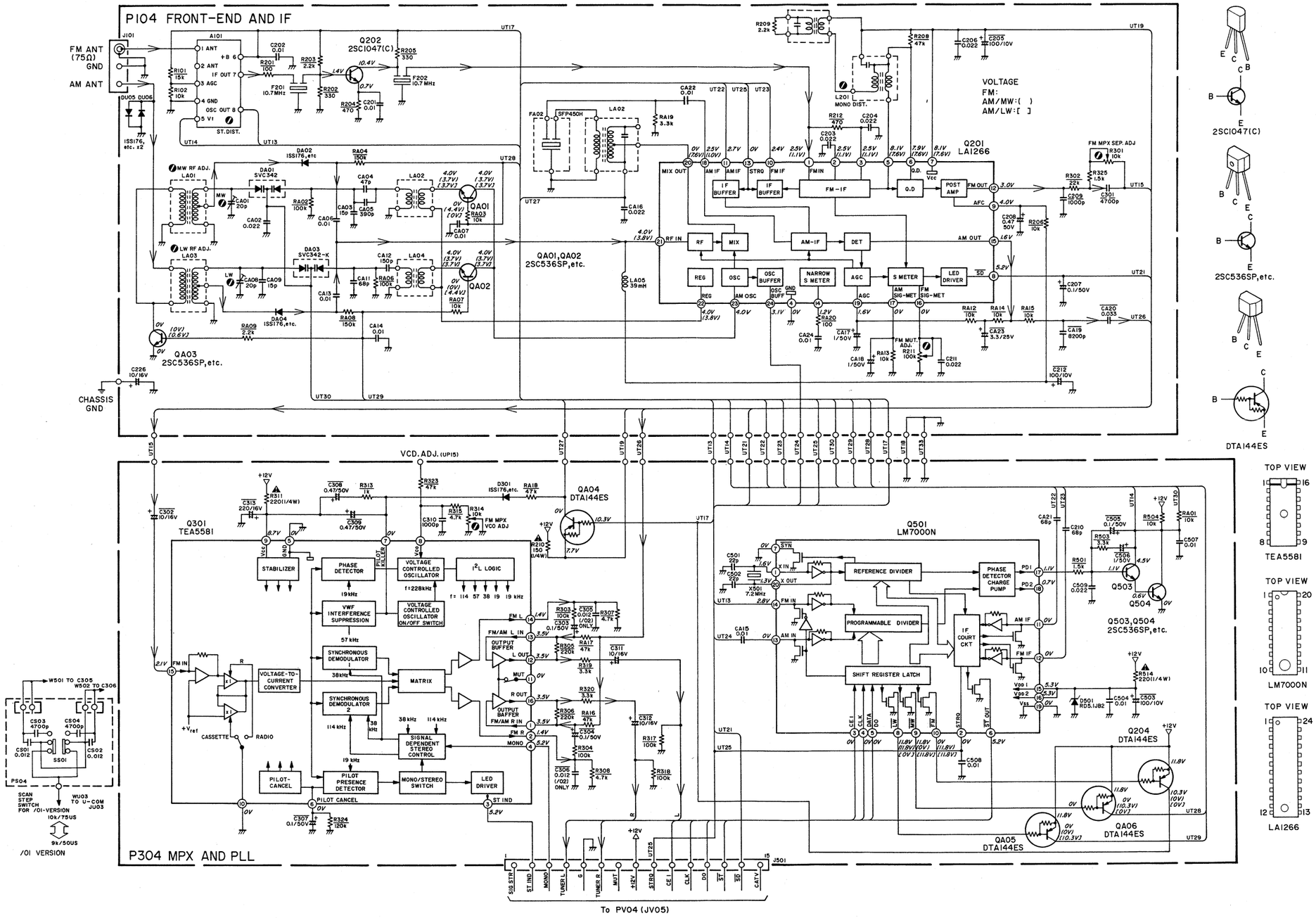
Remote controller (RC-60SR) x 1
Batteries (Size "AAA", R03) x 2
FM dipole antenna x 1
AM loop antenna x 1

Specifications subject to change without prior notice.

1. BLOCK DIAGRAM

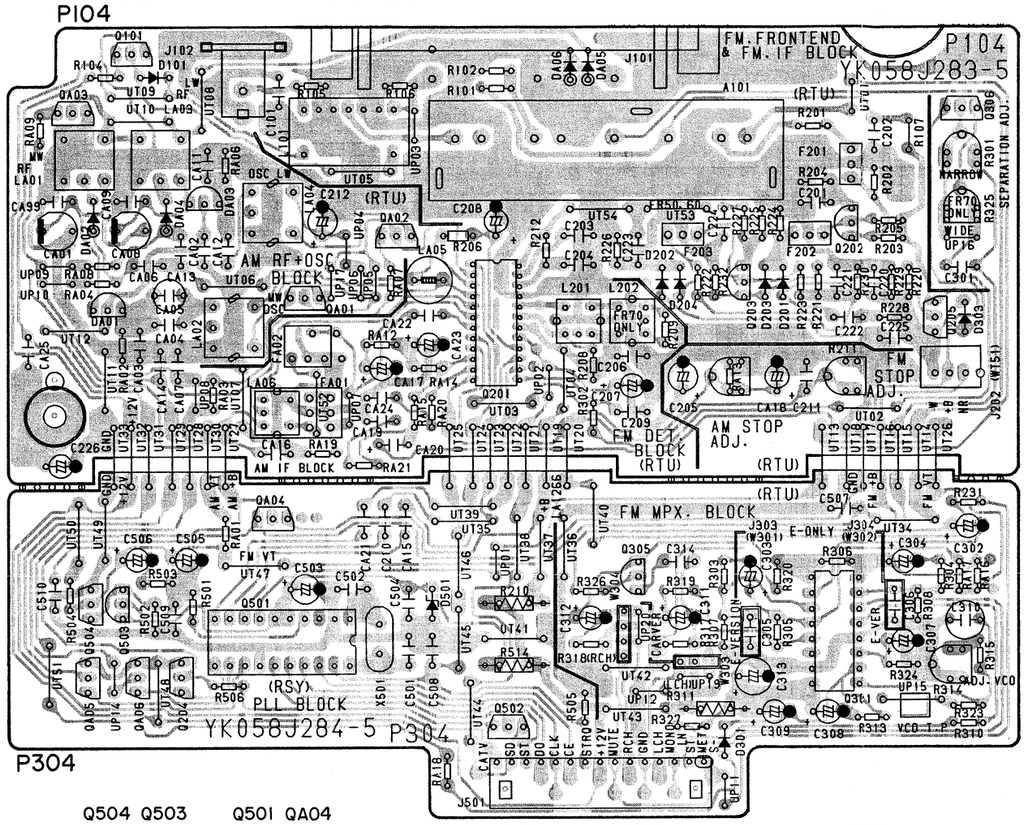


2. SCHEMATIC DIAGRAM AND PARTS LOCATION (Pattern side)



QA03 Q101 QA01 QA02 Q201 Q203 Q202 Q205 Q306

P104

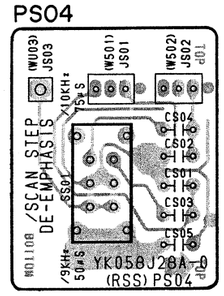


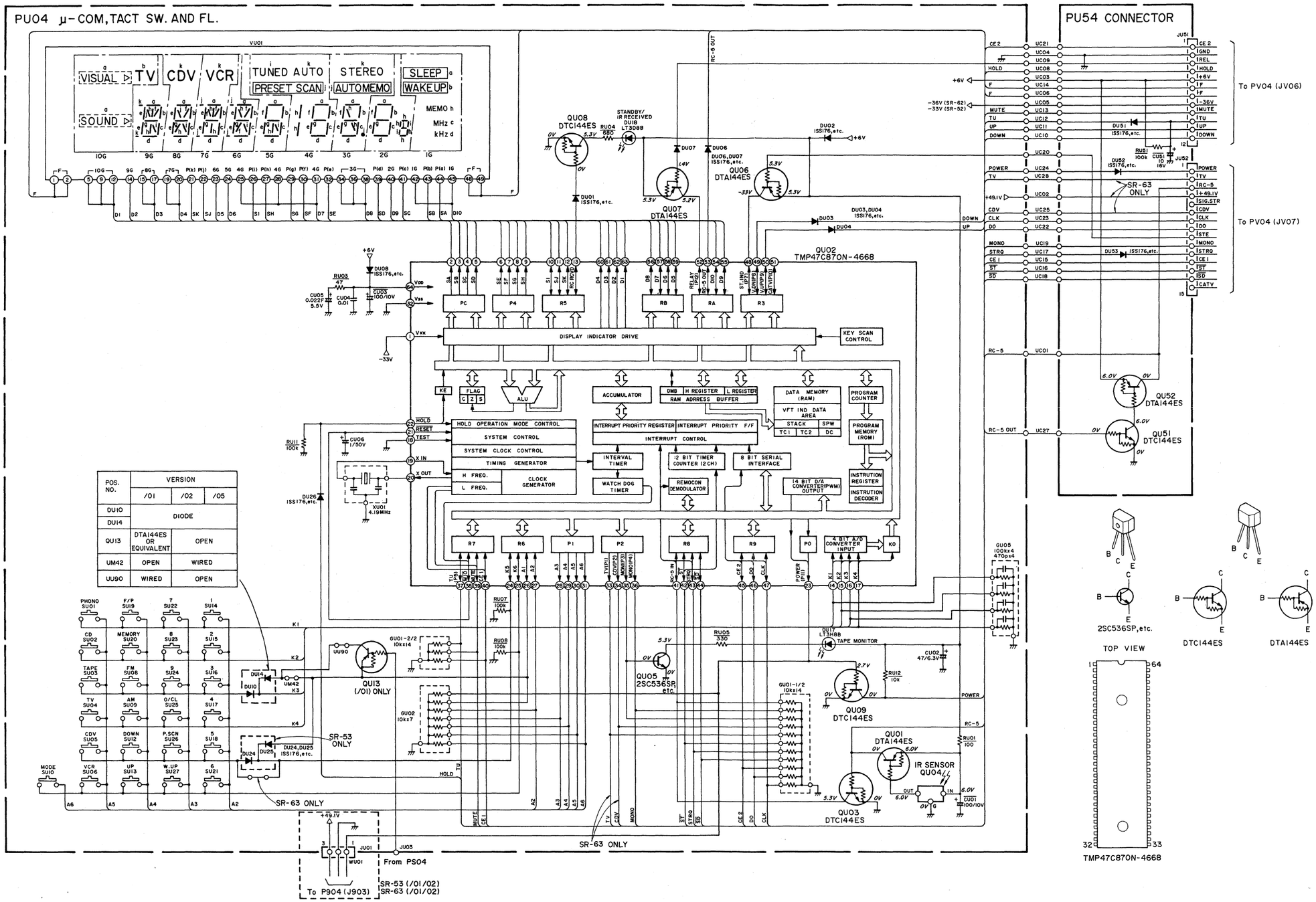
P304

Q504 Q503 Q501 QA04
QA05 QA06 Q204

Q502 Q305 Q301

PS04

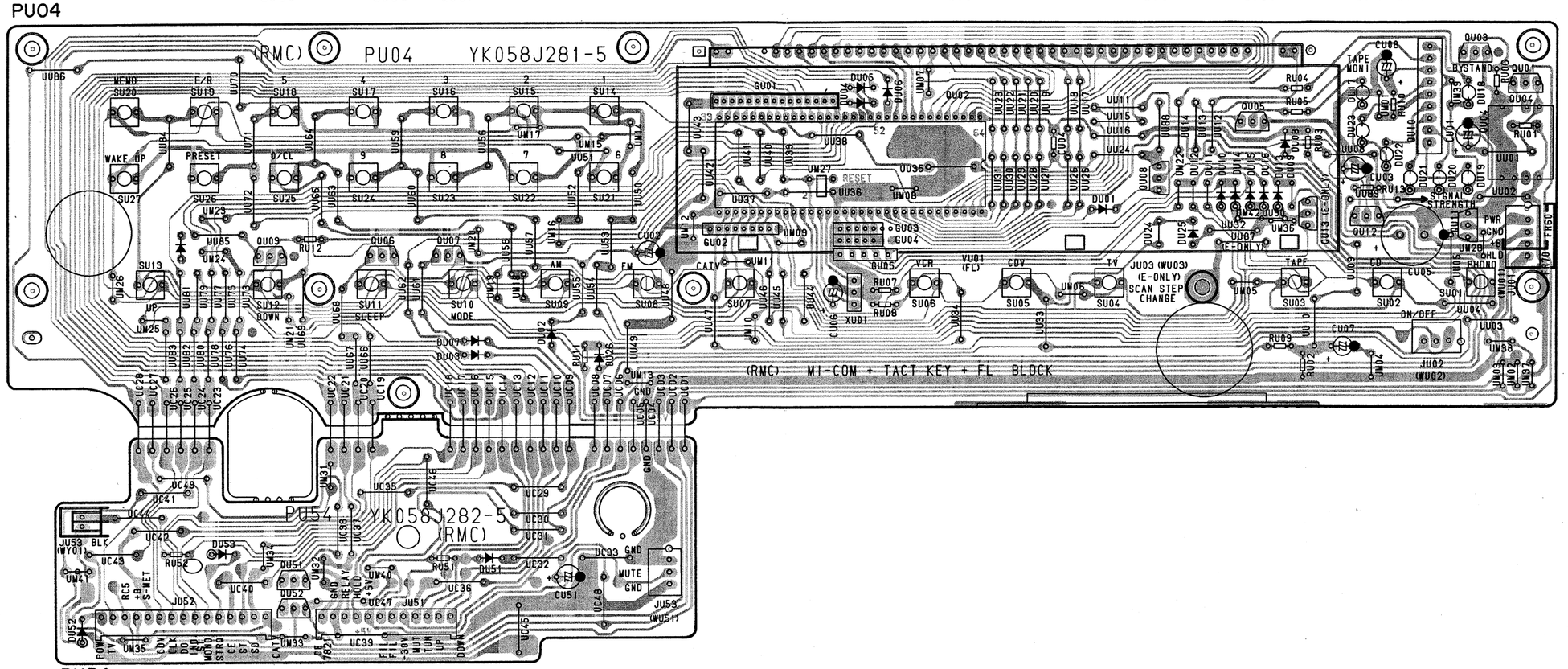




POS. NO.	VERSION		
	/01	/02	/05
DU10	DIODE		
DU14			
QU13	DTA144ES OR EQUIVALENT		OPEN
UM42	OPEN		WIRED
UU90	WIRED		OPEN

PU04

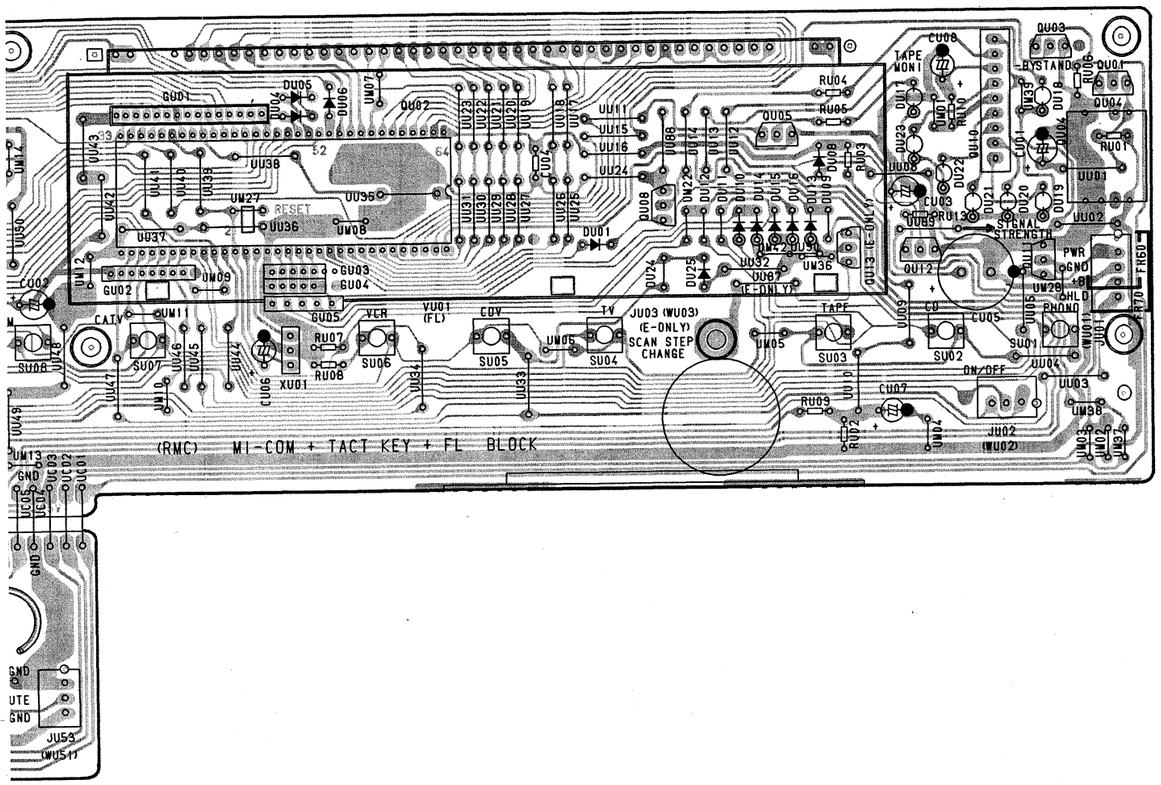
QU09 QU06 QU07 QU02 QU08 QU05 QU13 QU12 QU10 QU11 QU03 QU01 QU04



PU54

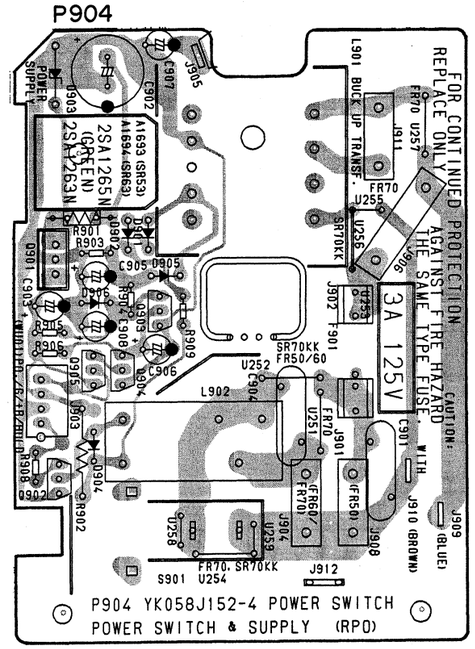
QU51 QU52

QU02 QU08 QU05 QU13 QU12 QU10 QU11 QU03 QU01 QU04

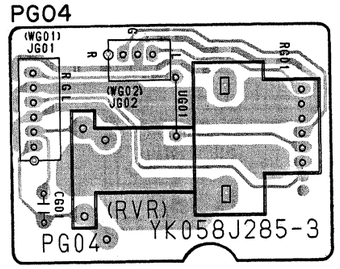


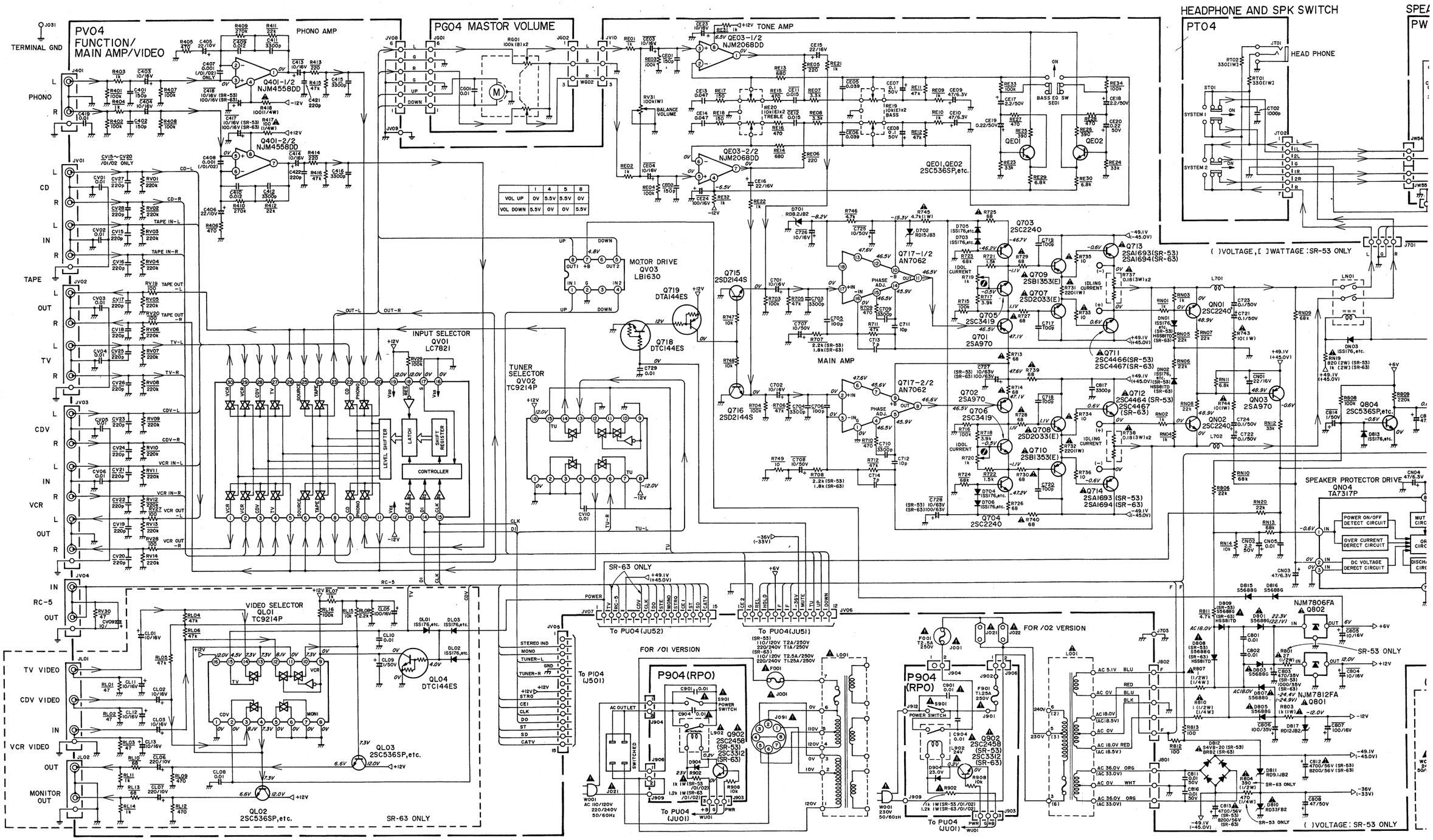
Q901 Q902~Q905

P904

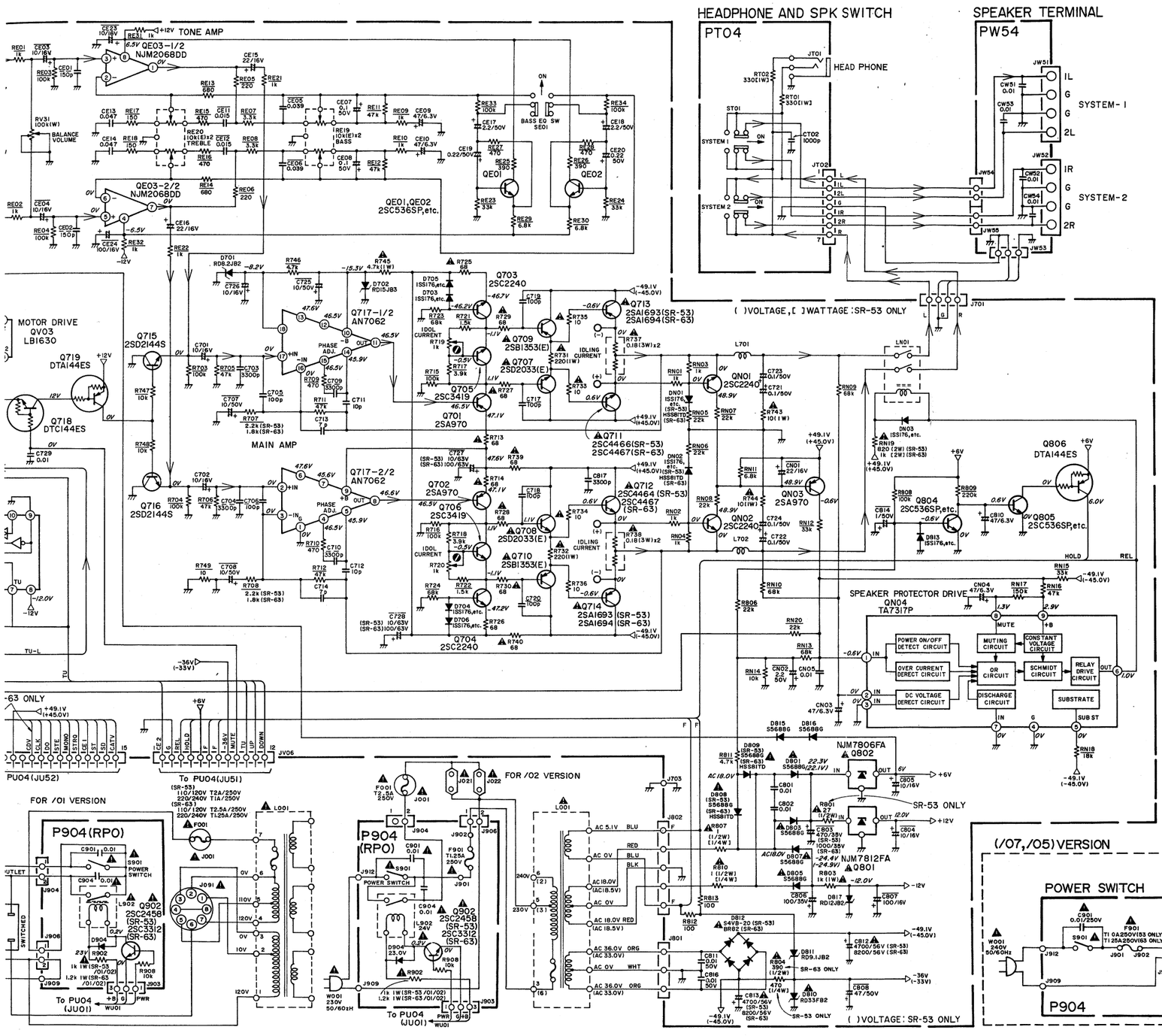


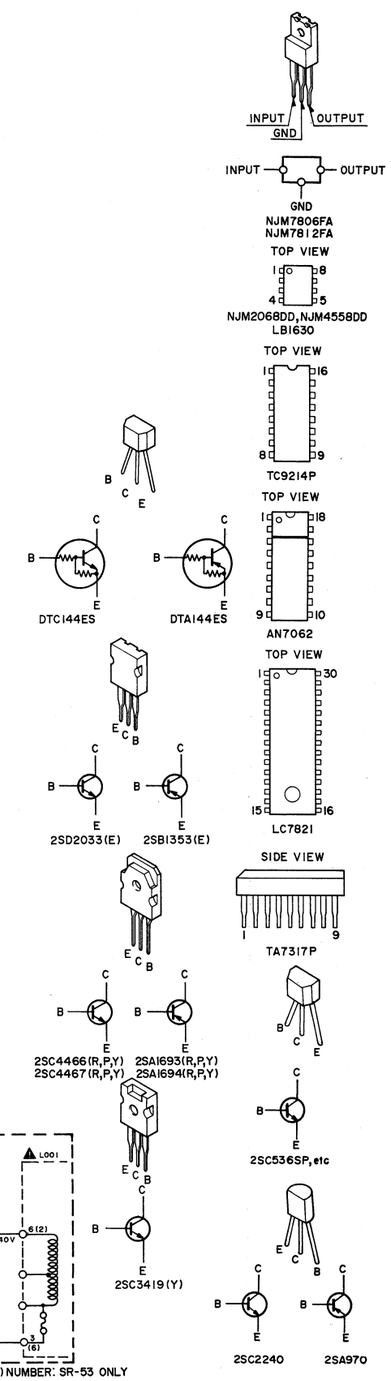
PG04





	1	4	5	8
VOL UP	0V	5.5V	5.5V	0V
VOL DOWN	5.5V	0V	0V	5.5V


HEADPHONE AND SPK SWITCH
PT04
HEAD PHONE
SYSTEM-1
SYSTEM-2
SPEAKER TERMINAL
PW54
TONE AMP
NJM2068DD
QE01,QE02
2SC536SP,etc.
BALANCE VOLUME
BASS EQ SW
MOTOR DRIVE
QV03
LB1630
MAIN AMP
AN7062
2SD2144S
DTA144ES
DTC144ES
2SA970
2SC3419
2SC2240
2SA1693(SR-53)
2SA1694(SR-63)
2SD2033(E)
2SB1353(E)
SPEAKER PROTECTOR DRIVE
QN04
TA7317P
POWER ON/OFF DETECT CIRCUIT
OVER CURRENT DERECT CIRCUIT
DC VOLTAGE DERECT CIRCUIT
MUTING CIRCUIT
CONSTANT VOLTAGE CIRCUIT
OR CIRCUIT
SCHMIDT CIRCUIT
RELAY DRIVE CIRCUIT
DISCHARGE CIRCUIT
SUBSTRATE
NJM7806FA
Q802
NJM7812FA
Q801
SR-53 ONLY
( )VOLTAGE,[ ]WATTAGE:SR-53 ONLY
( )VOLTAGE: SR-53 ONLY
FOR /01 VERSION
FOR /02 VERSION
P904(RPO)
POWER SWITCH
(/07,/05)VERSION
( )NUMBER: SR-53 ONLY
To PU04(JU52)
To PU04(JU51)
To PU04(JU01)

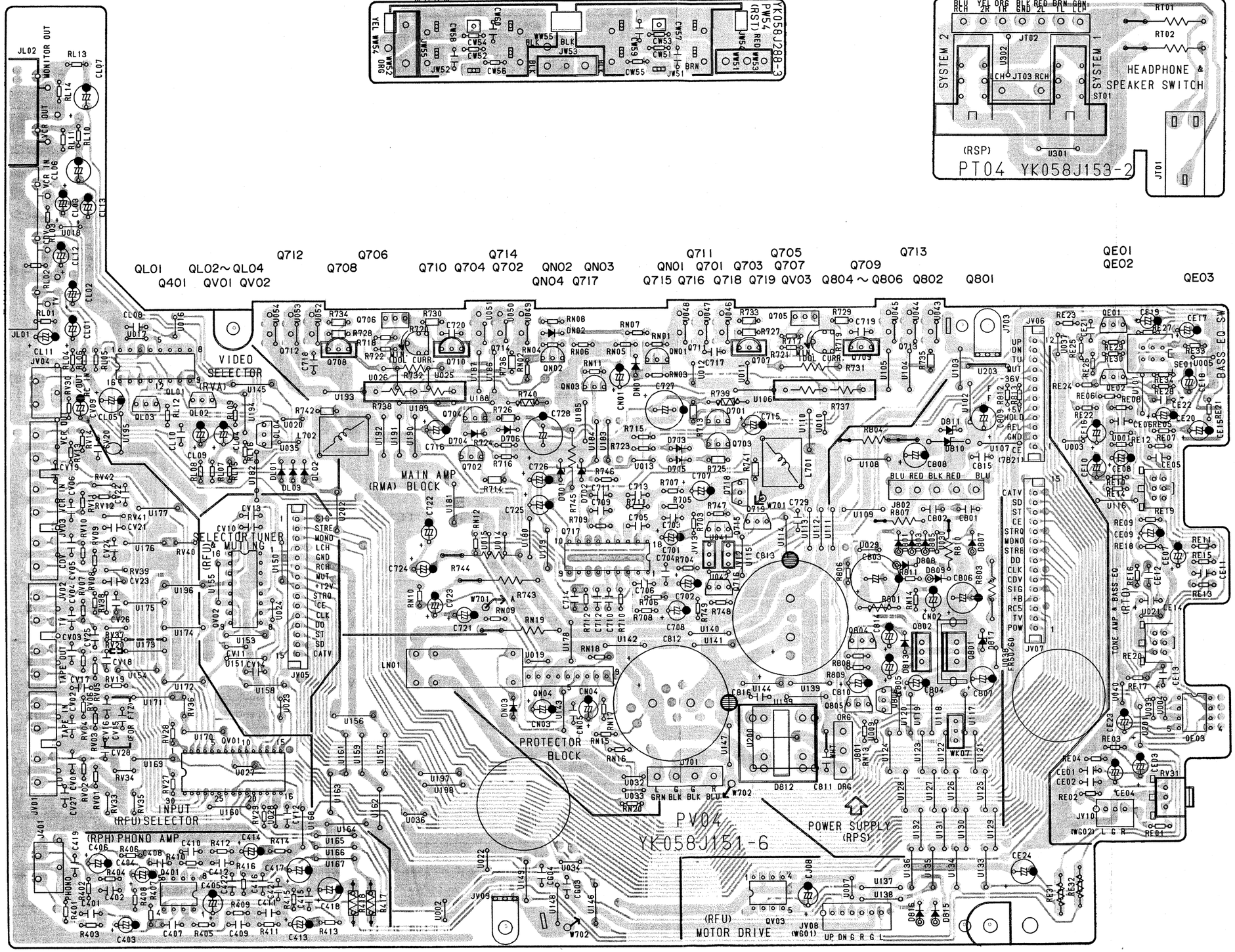

INPUT
OUTPUT
GND
NJM7806FA
NJM7812FA
TOP VIEW
NJM2068DD,NJM4558DD
LB1630
TC9214P
DTC144ES
DTA144ES
AN7062
2SD2033(E)
2SB1353(E)
LC7821
SIDE VIEW
TA7317P
2SC4466(R,P,Y)
2SC4467(R,P,Y)
2SA1693(R,P,Y)
2SA1694(R,P,Y)
2SC536SP,etc
2SC3419(Y)
2SC2240
2SA970

PV04

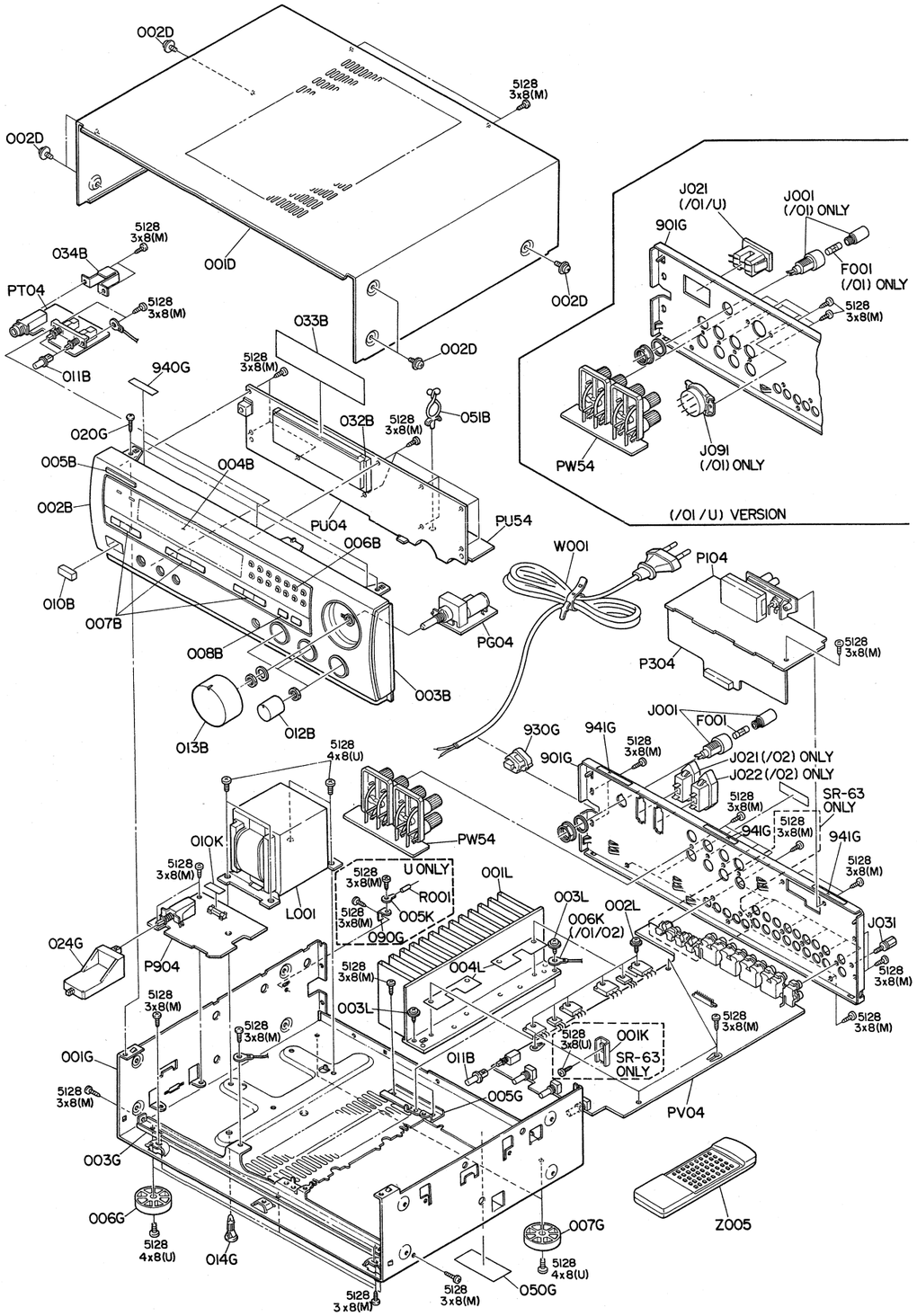
PW54

PT04

Q712 Q706 Q714 Q711 Q705 Q713 QE01
QE02
QL01 QL02~QL04 Q708 Q710 Q704 Q702 QN02 QN03 QN01 Q701 Q703 Q707 Q709
QE03
Q401 QV01 QV02 QN04 Q717 Q715 Q716 Q718 Q719 QV03 Q804~Q806 Q802 Q801



3. EXPLODED VIEW AND PARTS LIST



REF. DESIG.	PART NO.	DESCRIPTION
002B	4822 426 51635	Front Panel (SR53) [/01B/02B]
	4822 426 51686	Front Panel (SR53) [/01G/02G]
	4822 426 51695	Front Panel (SR63) [/01B/02B]
	4822 426 51696	Front Panel (SR63) [/01G/02G]
003B	4822 464 70619	Front Mold Chassis [/01B/02B]
	4822 464 70621	Front Mold Chassis [/01G/02G]
004B	4822 450 62138	Window
006B	4822 410 62853	Button, 10 Key [/01B/02B]
	4822 410 62856	Button, 10 Key [/01G/02G]
007B	4822 410 62854	Button, Function [/01B/02B]
	4822 410 62857	Button, Function [/01G/02G]
008B	4822 410 62855	Button, Tuning [/01B/02B]
	4822 410 62858	Button, Tuning [/01G/02G]
010B	4822 410 62744	Button, Power [/01B/02B]
	4822 410 62745	Button, Power [/01G/02G]
011B	4822 410 60343	Button, Push [/01B/02B]
	4822 410 60334	Button, Push [/01G/02G]
012B	4822 413 41589	Knob, Tone [/01B/02B]
	4822 413 41821	Knob, Tone [/01G/02G]
013B	4822 413 41679	Knob, Main Volume [/01B/02B]
	4822 410 41683	Knob, Main Volume [/01G/02G]
032B	4822 256 91642	Holder, FL
033B	4822 459 10942	Sticker, FL
051B	4822 459 80744	Clamper, Front PCB
002D	4822 501 11008	B.T. Screw (W/W) M4 x 8
006G	4822 462 42045	Leg, Front
007G	4822 462 42048	Leg, Rear
024G	4822 404 21272	Link, Power Switch
930G	4822 532 60948	Bushing, AC Cord
002L	4822 502 12512	B.T. Screw (W/W) M3 x 12
003L	4822 502 12512	B.T. Screw (W/W) M3 x 12
004L	4822 466 92989	Sheet, OKABE MICA

REF. DESIG.	PART NO.	DESCRIPTION
⚠ F001	4822 070 31002	Fuse T2.5A 250V (SR53) [/01B/01G]
	4822 070 31252	Fuse T1.25A 250V (SR63) [/01B/01G]
	4822 253 40166	Fuse T2.5A 250V [/02B/02G]
⚠ J001	4822 256 30233	Jack, Fuse Holder
⚠ J021	4822 267 31693	Jack, AC Outlet [/01B/01G]
	4822 267 30597	Jack, AC Outlet [/02B/02G]
⚠ J022	4822 267 30597	Jack, AC Outlet [/02B/02G]
⚠ J091	4822 272 10327	Voltage Selector [/01B/01G]
⚠ L001	4822 146 21759	Power Transformer (SR53) [/01B/01G]
	4822 146 21758	Power Transformer (SR53) [/02B/02G]
	4822 146 21763	Power Transformer (SR63) [/01B/01G]
	4822 146 21762	Power Transformer (SR63) [/02B/02G]
Z001	4822 303 50079	EXT. Antenna, FM
Z003	4822 157 63083	Loop Antenna, AM
Z005	4822 218 10351	Remote Control, RC-60SR
001T	4822 736 21852	User Manual (SR53)
	4822 736 21856	User Manual (SR63)
Z007	4822 321 62156	Pin Cord
Z008	4822 070 32001	Fuse, T2A 250V (SR53) [/01B/01G]
	4822 253 40166	Fuse, T2.5A 250V (SR63) [/01B/01G]
Z009	4822 267 31647	AC Adapter [/01B/01G]

4. TEST EQUIPMENT REQUIRED FOR SERVICING

This table lists the test equipment required for servicing.

Item	Use
Distortion Analyzer	Distortion measurements
Audio Oscillator	Sinewave and squarewave signal source
ACVTVM	Voltage measurements (AC)
Oscilloscope	Waveform analysis and trouble shooting and ASO alignment
Circuit Tester	Trouble shooting
DCVTVM	Voltage measurements (DC)
AC Wattmeter	Monitors primary power to amplifier
Line Voltmeter	Monitors potential of primary power to amplifier
Variable Autotransformer	Adjust level of primery power to amplifier
Shorting Plug	Shorts amplifier input to eliminate noise pickup

5. IDLING CURRENT ADJUSTMENT

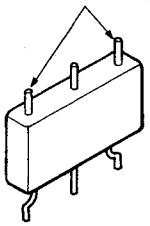
(1) Before switching the power ON, set the Master Volume control to the minimum position and the Balance and Tone controls to the center positions. Then, rotate the semi-fixed resistors R719 (L CH) and R720 (R CH) on the PC board PV04 fully clockwise.
(2) Connect a digital voltmeter, set for the DC voltage input to the pertinent test points (the marked ones of R737-R738) on the PC board PV04. (Positive: Rear side, Negative: Front side)
(3) After the completion of the above setup.
Switch the power ON and adjust the semi-fixed resistors R719 (L CH) and R720 (R CH) on the PC board PV04 according to the reading of the digital voltmeter. The setting values are 6 ~ 7.6 mV (16.7 ~ 20 mA) of the both channels.

Please refer to the table below.

Power ON

20 sec later	2mV
1 min later	4mV
More than 5min	6 ~7.6mV

Measurement point



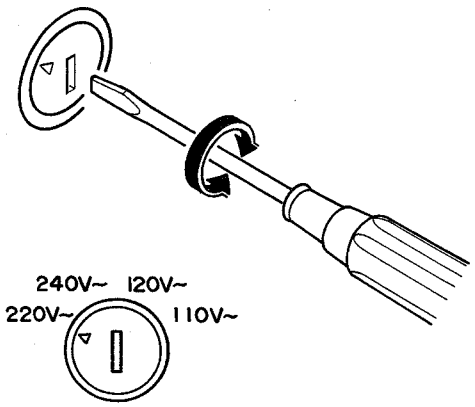
R737/R738

6. VOLTAGE CONVERSION

- **/01 Version ONLY**

To convert the unit to a different power source voltage, change the position as illustrated in the drawing below.

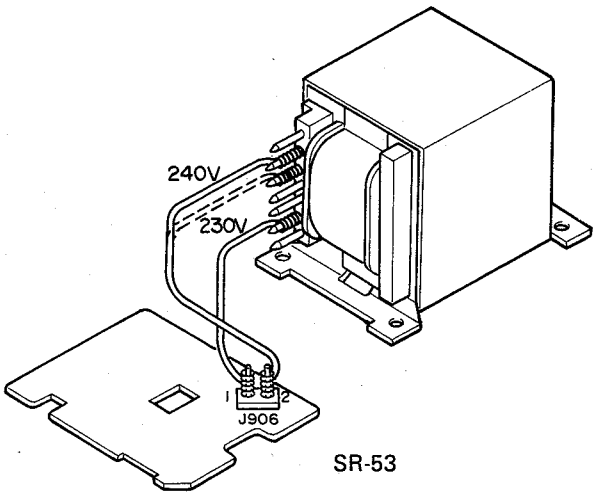
VOLTAGE SELECTOR



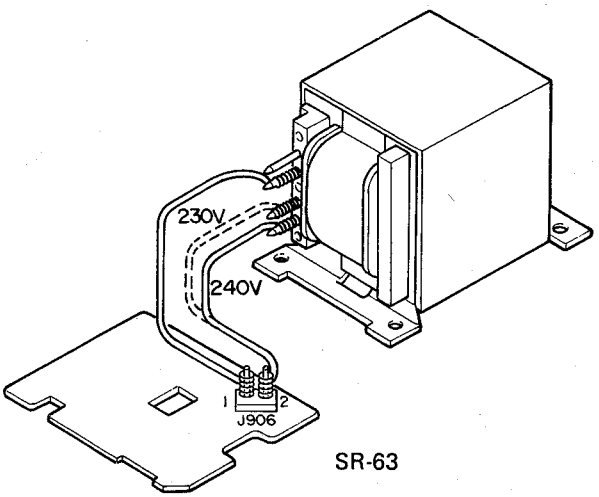
CAUTION
DISCONNECT POWER SUPPLY CORD FROM AC OUTLET BEFORE CONVERTING VOLTAGE.

7. HOW TO CHANGE THE SUPPLY VOLTAGE (/02/05/07 Versions)

Refer to the following diagram for the voltage change procedure.



SR-53



SR-63

8. SERVICE PROGRAM

1. T.R POINT ME (tracking point memory) mode.
From power OFF (backup mode), when the power switch is pressed ON while pressing the up and MEMO key simultaneously, the T.R POINT ME mode is called.
Frequencies to be memorized are as follows.

	P1	P2	P3	P4	P5	P6	P7	P8
FM	90.0 MHz	98.0 MHz	106.0 MHz	87.5 MHz				
AM (with LW)					603 kHz	999 kHz	1404 kHz	173 kHz
AM (without LW)					603 kHz	999 kHz	1404 kHz	531 kHz
AM (USA)					600 kHz	1000 kHz	1400 kHz	520 kHz

	P9	P10	P11	P12-P30	
FM					
AM (with LW)	209 kHz	272 kHz	152 kHz	531 kHz	
AM (without LW)	531 kHz	531 kHz	531 kHz	531 kHz	
AM (USA)	520 kHz	520 kHz	520 kHz	520 kHz	

2. Microprocessor and FL operation check program mode
2-1 FL segment check
- This program is to check each FL segment for its lighting.
  (1) When the test mode is entered, microprocessor's MUTE OUT becomes "HIGH" to apply muting to the unit itself. No change occurs in any other setting.
  (2) At first, every segment is aliget. for 3 seconds.

2-2 Service mode (input selector check)
- This program is to check the input selector, etc. of the unit itself for functioning.
  (1) Microprocessor's MUTE OUT is made "LOW".
  (2) In a procedure shown in the following, each object is subject to execution of check for 3 seconds, and operation shifts to the next one. Then, operation starts at step 1.
  (3) At the time of object change, muting is applied at the aforesaid timing.
  (4) When the final step is executed, operation returns to step 1 to repeat.
  (5) When the (UP) key is pressed, operation shifts to the next step. However, in this case, any continuous pressure of this key is not accepted. Operation is stopped by the (DFL) key and is resumed by the (UP) key. Either is always accepted.

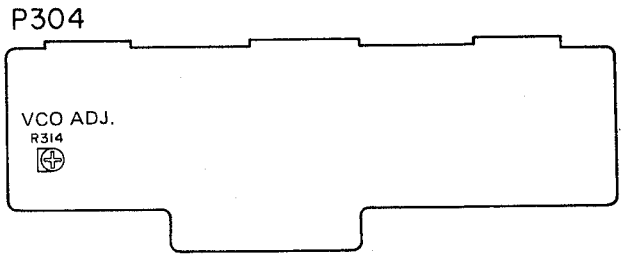
Step	Function	Notes
1	FM	FM mode: Auto, last frequency (initial)
2	FM	FM mode: Mono, last frequency (initial)
3	PHONO	
4	CD	
5	TAPE	
6	TV	
7	CDV	
8	VCR	

9. TUNER ALIGNMENT PROCEDURES

1. When you adjust a set, use a signal generator with a counter with which you can correctly read frequencies, or connect a counter to a signal generator with a counter terminal for both AM and FM.
2. As a rule, use a band-pass filter (B.P.F 200-15 kHz) designated by IHF in adjustment and measurement of FM.
   Be sure to use a filter especially in adjustment of STEREO DISTORTION and SEPARATION. (Attenuation at 19 kHz is to be 30 dB at least.)
3. The controller (QU02) used in this set has a function to preset and memorize the frequencies of guard and tracking point to be used in adjustment and measurement.

   Caution:
   Alignment of FM needs to set the IF BAND SWITCH to "WIDE" position if any other instruction does not require.

4. Adjustment of FM MPX VCO
The part to be adjusted: R314
1) Set the frequency and output of the signal generator at 98 MHz and 500 μV (54 dB)/75 ohms respectively and synchronize the set to them.
2) After confirming that the "TUNED" indicator in FL display is not turned off when you set FM MODE SWITCH in AUTO STEREO position (AUTO is alight), turn off the modulation of the signal generator.
3) After connecting a frequency counter to the test point, UP15, adjust R314 so that the frequency counter shows 228 (±0.05) kHz.



- Set to T.R point ME mode of the service program, after that, needs POWER OFF and POWER ON again. (P1) to (P7) in the Digital Readout Frequency Setting column shows preset numbers for the above mode. Before alignment, connect a dummy resistor of 47 kohms to the tape out terminal.

5. FM Alignment Procedures
(Function switch at "FM" position and MODE switch at "MONAURAL" position)

- **FM RF Alignment**

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Digital Readout Frequency Setting	Adjust
1	FM signal generator to FM antenna terminal. Adjust the RF signal output so that slight noise occurs at the upper and lower sides of the output waveform.	98.0 MHz	AC VTVM to L- or R-channel output (TAPE OUT)	98.0 MHz (P2)	Front end IFT for maximum output and minimum distortion.
2	FM signal generator 500 μV output to FM antenna terminal (75-ohm).	98.0 MHz		98.0 MHz (P2)	
3			Distortion meter to L- or R-channel output (TAPE OUT)		L201 core for minimum distortion.

- **FM IF Alignment**
(Function switch at "FM" position and MODE switch at "AUTO STEREO" position)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Digital Readout Frequency Setting	Adjust
1	FM signal generator 500 μV output modulated by MPX signal generator to FM antenna terminal (75-ohm). Modulation level: IHF 67.5 kHz +9% pilot dev. DIN 40 kHz +8% pilot dev.	Stereo L-channel (1,000 Hz)	VTVM to L-channel output (TAPE OUT L channel)	98.0 MHz (P2)	Front end IFT for minimum distortion.
2		Stereo R-channel (1,000 Hz)	VTVM to R-channel output (TAPE OUT R channel)		

- **Muting Level Alignment**
(Function switch at "FM" position and MODE switch at "AUTO STEREO" position)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Digital Readout Frequency Setting	Adjust
1	FM signal generator 6.3 μV output to FM antenna terminal (75-ohm)	98.0 MHz		98.0 MHz (P2)	R211 to a point at which shows "tuned."

- **Multiplex Alignment**
  (Function switch at "FM" position and MODE switch at "AUTO STEREO" position)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Digital Readout Frequency Setting	Adjust
1	FM signal generator 500 μV output modulated by MPX signal generator to FM antenna terminal (75-ohm) Modulation level: IHF67.5 kHz +9% pilot dev. DIN 40 kHz +8% pilot dev.	Stereo L-channel (1,000 Hz)	VTVM to R-channel output (TAPE OUT R channel)	98.0 MHz (P2)	R301 so that channel separation is identical between both channels.
2		Stereo R-channel (1,000 Hz)	VTVM to L-channel output (TAPE OUT L channel)		
3	Repeat steps 1 and 2.				

6. AM/MW Alignment Procedures
(Function switch at "AM" position)

- **AM IF Alignment**

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Digital Readout Frequency Setting	Adjust
1	Sweep generator to AM antenna terminal	450 kHz	AC VTVM to L- or R-channel output (TAPE OUT)	–	FA01 for Europe versions, LA06 Europe USA, versions maximum and symmetrical waveform.

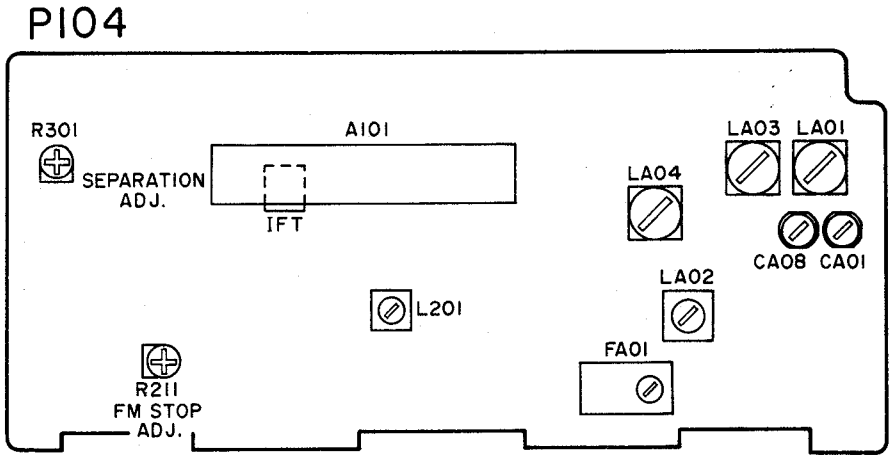
- **AM RF Alignment**

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Digital Readout Frequency Setting	Adjust
1	AM signal generator to AM loop antenna in a test loop	603 kHz	VTVM to L- or R-channel output (TAPE OUT)	603 kHz (P5)	LA01 for maximum output.
2		1,404 kHz		1,404 kHz (P7)	CA01 for maximum output.
3	Repeat steps 1 and 2 until sensitivity is maximized.				

- **LW RF Alignment**
  (For Europe version)

Step	Signal Source Connection	Signal Frequency	Indicator Connection	Digital Readout Frequency Setting	Adjust
1	AM signal generator to AM loop antenna in a test loop	173 kHz	VTVM to L- or R-channel output (TAPE OUT)	173 kHz (P8)	LA03 for maximum output.
2		272 kHz		272 kHz (P10)	CA08 for maximum output.
3	Repeat steps 1 and 2 until sensitivity is maximized.				

10. ALIGNMENT POINTS AND TEST POINTS



11. TUNER MICROPROCESSOR SPECIFICATIONS

1. Receiving Frequency Range, Channel Space, Reference
Frequency and Intermediate Frequency

		Receiving Frequency	Channel Space	Reference Frequency	Intermediate Frequency
Japan	FM	76.0~90 MHz	100 kHz	25 kHz	−10.7 MHz
	AM	531~1602 kHz	9 kHz	9 kHz	+450 kHz
U.S.A.	FM	87.5~108.0 MHz	100 kHz	25 kHz	+10.7 MHz
	AM	520~1710 kHz	10 kHz	10 kHz	+450 kHz
Europe	FM	87.50~108.00 MHz	50 kHz	25 kHz	+10.7 MHz
	MW	531~1602 kHz	9 kHz	9 kHz	+450 kHz
	LW	152~282 kHz	1 kHz	1 kHz	+450 kHz

12. ELECTRICAL PARTS LIST

ASSIGNMENT OF COMMON PARTS CODES.

RESISTOR

R***: (1) GD05---140, Carbon film fixed resistor, ±5%, 1/4W
R***: (2) GD05---160, Carbon film fixed resistor, ±5%, 1/6W

① — Resistance value

Examples

① Resistance value

0.1Ω...001	10Ω...100	1kΩ...102	100kΩ...104
0.5Ω...005	18Ω...180	2.7kΩ...272	680kΩ...684
1Ω...010	100Ω...101	10kΩ...103	1MΩ...105
6.8Ω...068	390Ω...391	22kΩ...223	4.7MΩ...475

(Note) Please distinguish 1/4W from 1/6W by the shape of parts used actually.

C***: CERAMIC CAP.

(1) DD1---370, Ceramic condenser
①② Disc type
Temp. coeff. P350 ~ N1000, 50V
Capacity value
Tolerance

Examples

① Tolerance (Capacity deviation)
±0.25pF...0
±0.5pF...1
±5%...5

* Tolerance of COMMON PARTS handled here are as follows:
0.5pF ~ 5pF...±0.25pF
6pF ~ 10pF...±0.5pF
12pF ~ 560pF...±5%

② Capacity value

0.5pF...005	3pF...030	100pF...101
1pF...010	10pF...100	220pF...221
1.5pF...015	47pF...470	560pF...561

C***: CERAMIC CAP.

(1) DK16---300, High dielectric constant ceramic condenser
Disc type
①
Temp. chara. 2B4, 50V
Capacity value

Example

② Capacity value

100pF...101	1000pF...102	10000pF...103
470pF...471	2200pF...222	

C***: ELECTROLY CAP. (⧧), FILM CAP. (⧦)

(1) EA------10, Electrolytic condenser
①② One-way lead type, Tolerance ±20%
Dielectric strength
Capacity value

Examples

① Capacity value

0.1μF...104	4.7μF...475	100μF...107
0.33μF...334	10μF...106	330μF...337
1μF...105	22μF...226	1100μF...108
		2200μF...228

② Working voltage

6.3V...006	25V...025
10V...010	35V...035
16V...016	50V...050

(2) DF15---350, Plastic film condenser
One-way type, Mylar ±5% 50V
①
Capacity value

Examples

① Capacity value

0.001μF (1000pF)...102	0.1μF...104
0.0018μF.....182	0.56μF...564
0.01μF.....103	1μF...105
0.015μF.....153	

REF. DESIG.	PART NO.	DESCRIPTION
		PG04-MASTER VOLUME CIRCUIT BOARD
		PG04-CAPACITOR
CG01	4822 122 30043	Ceramic 0.01μF +80% -20% 50V
		PG04-RESISTOR
RG01	4822 100 12093	100K Ω (D) x 2, Variable
		PS04-DE-EMPHASIS/SCAN STEP CIRCUIT B OARD [/01B/01G]
SS01	4822 277 21574	Slide Switch, Scan Step [/01B/01G]
		PT04-HEADPHONE/SPEAKER SW. CIRCUIT BOARD
		PT04-RESISTORS
⚠ RT01	4822 053 10331	330 Ω ±5% 1W
⚠ RT02	4822 053 10331	330 Ω ±5% 1W
		PT04-MISCELLANEOUS
JT01	4822 267 31274	Jack, Headphone [/01B/02B]
	4822 267 31365	Jack, Headphone [/01G/02G]
ST01	4822 276 20504	Push Switch, Speaker
		PU04-U-COM/TACT SW./FL CIRCUIT BOARD
		PU04-CAPACITORS
CU02	4822 124 21901	Elect 47μF 6.3V
CU04	4822 122 40586	Ceramic 0.01μF ±20%
CU05	4822 124 23295	Big Elect 0.022μF 5.5V
CU06	4822 124 23053	Elect 1μF 50V
		PU04-CAPACITORS
GU01	4822 111 91936	Array 10K Ω x 14
GU02	4822 111 91678	Array 10K Ω x 7
GU05	4822 126 11191	Array 470pF/100K Ω x 4
		PU04-SEMICONDUCTORS
DU01 ~ DU04	4822 130 33305	Diode 1SS176, etc.
DU06	4822 130 33305	Diode 1SS176, etc.
DU07	4822 130 33305	Diode 1SS176, etc.
DU08	4822 130 33305	Diode 1SS176, etc.
DU10	4822 130 33305	Diode 1SS176, etc.
DU14	4822 130 33305	Diode 1SS176. etc.
DU17	4822 130 80325	L. E. D. LT3H8B (YEL)
DU18	4822 130 80326	L. E. D. LT3D8B (RED)
DU24	4822 130 33305	Diode 1SS176, etc. (SR53)
DU25	4822 130 33305	Diode 1SS176, etc. (SR53)
DU26	4822 130 33305	Diode 1SS176, etc.
DU52	4822 130 33305	Diode 1SS176, etc.
DU53	4822 130 33305	Diode 1SS176, etc.
QU01	4822 130 42682	Transistor, Digital DTA144ES
QU02	4822 209 62558	Microprocessor TMP47C870N
QU03	4822 130 42594	Transistor, Digital DTC144ES
QU04	4822 209 82139	Photo Unit PAS-C0617
QU05	4822 130 42298	Transistor 2SC536SP, etc.
QU06	4822 130 42682	Transistor, Digital DTA144ES
QU07	4822 130 42682	Transistor, Digital DTA144ES
QU08	4822 130 42594	Transistor, Digital DTC144ES
QU09	4822 130 42594	Transistor, Digital DTC144ES
QU13	4822 130 42682	Transistor, Digital DTA144ES [/01B/01G]

REF. DESIG.	PART NO.	DESCRIPTION
		PU04-MISCELLANEOUS
SU01 ~ SU06	4822 276 20508	Push Switch, Tact
SU08 ~ SU10	4822 276 20508	Push Switch, Tact
SU12 ~ SU27	4822 276 20508	Push Switch, Tact
VU01	4822 130 90857	Display Unit FIP10BGM8
XU01	4822 242 72194	Ceramic Resonator 4.19MHz
		PU54-CONNECTOR CIRCUIT BOARD
		PU54-SEMICONDUCTORS
DU51	4822 130 33305	Diode 1SS176, etc.
QU51	4822 130 42594	Transistor, Digital DTC144ES
QU52	4822 130 42682	Transistor, Digital DTA144ES
		PV04-FUNCTION/MAIN AMP/ VIDEO CIRCUIT BOARD
		PV04-CAPACITORS
CE03	4822 124 21894	Elect 10µF 16V
CE04	4822 124 21894	Elect 10µF 16V
CE07	4822 124 41604	Elect 0.1µF 50V
CE08	4822 124 41604	Elect 0.1µF 50V
CE09	4822 124 21901	Elect 47µF 6.3V
CE10	4822 124 21901	Elect 47µF 6.3V
CE15	4822 124 23055	Elect 22µF 16V
CE16	4822 124 23055	Elect 22µF 16V
CE17	4822 124 40786	Elect 2.2µF 50V
CE18	4822 124 40786	Elect 2.2µF 50V
CE19	4822 124 21895	Elect 0.22µF 50V
CE20	4822 124 21895	Elect 0.22µF 50V
CE23	4822 124 21894	Elect 10µF 16V
CL01	4822 124 21894	Elect 10µF 16V (SR63)
CL02	4822 124 21894	Elect 10µF 16V (SR63)
CL03	4822 124 21894	Elect 10µF 16V (SR63)
CL08	4822 122 30043	Ceramic 0.01µF +80% -20% 50V (SR63)
CL09	4822 124 23053	Elect 1µF 50V (SR63)
CL10	4822 122 30043	Ceramic 0.01µF +80% -20% 50V (SR63)
CL11	4822 124 21894	Elect 10µF 16V (SR63)
CL12	4822 124 21894	Elect 10µF 16V (SR63)
CL13	4822 124 21894	Elect 10µF 16V (SR63)
CN02	4822 124 40786	Elect 2.2µF 50V
CN03	4822 124 21901	Elect 47µF 6.3V
CN04	4822 124 21901	Elect 47µF 6.3V
CN05	4822 122 30043	Ceramic 0.01µF +80% -20% 50V
CV01 ~ CV06	4822 122 30043	Ceramic 0.01µF +80% -20% 50V
CV09	4822 124 21894	Elect 10µF 16V
CV10	4822 122 30043	Ceramic 0.01µF +80% -20% 50V
C403	4822 124 21894	Elect 10µF 16V
C404	4822 124 21894	Elect 10µF 16V
C405	4822 124 21738	Elect 22µF 10V
C406	4822 124 21738	Elect 22µF 10V
C413	4822 124 21894	Elect 10µF 16V
C414	4822 124 21894	Elect 10µF 16V
C417	4822 124 21894	Elect 10µF 16V (SR53)
C418	4822 124 21894	Elect 10µF 16V (SR53)
C419	4822 122 30043	Ceramic 0.01µF +80% -20% 50V

REF. DESIG.	PART NO.	DESCRIPTION
C701	4822 124 21894	Elect 10µF 16V
C702	4822 124 21894	Elect 10µF 16V
C711	4822 126 32185	Ceramic 10pF ±0.5pF 50V
C712	4822 126 32185	Ceramic 10pF ±0.5pF 50V
C713	4822 122 40367	Ceramic 7pF ±0.5pF 50V
C714	4822 122 40367	Ceramic 7pF ±0.5pF 50V
C721 ~ C724	4822 124 41604	Elect 0.1µF 50V
C726	4822 124 21894	Elect 10µF 16V
C727	4822 124 23623	Elect 100µF 63V (SR63)
	4822 124 41134	Elect 10µF 63V (SR53)
C728	4822 124 23623	Elect 100µF 63V (SR63)
	4822 124 41134	Elect 10µF 63V (SR53)
C729	4822 122 30043	Ceramic 0.01µF +80% -20% 50V
C801	4822 122 30043	Ceramic 0.01µF +80% -20% 50V
C802	4822 122 30043	Ceramic 0.01µF +80% -20% 50V
C804	4822 124 21894	Elect 10µF 16V
C805	4822 124 21894	Elect 10µF 16V
C810	4822 124 21901	Elect 47µF 6.3V
C811	4822 122 30043	Ceramic 0.01µF +80% -20% 50V
⚠ C812	4822 124 23346	Elect 8200µF 56V (SR63)
	4822 124 80695	Elect 4700µF 56V (SR53)
⚠ C813	4822 124 23346	Elect 8200µF 56V (SR63)
	4822 124 80695	Elect 4700µF 56V (SR53)
C814	4822 124 23053	Elect 1µF 50V
C816	4822 122 30043	Ceramic 0.01µF +80% -20% 50V
		PV04-RESISTORS
RE19	4822 100 12063	100K Ω (E), Variable Bass
RE20	4822 100 12063	100K Ω (E), Variable Treble
⚠ RN19	4822 053 11102	1K Ω ±5% 2W (SR63)
	4822 053 11821	820 Ω ±5% 2W (SR53)
RV31	4822 100 12062	100K Ω (W), Variable
⚠ R417	4822 050 21021	100 Ω ±5% 1/4W
⚠ R418	4822 050 21021	100 Ω ±5% 1/4W
⚠ R713	4822 050 26809	68 Ω ±5% 1/6W
⚠ R714	4822 050 26809	68 Ω ±5% 1/6W
R719	4822 100 11386	1K Ω, Trimming
R720	4822 100 11386	1K Ω, Trimming
⚠ R725 ~ ⚠ R730	4822 050 26809	68 Ω ±5% 1/6W
⚠ R731	4822 053 10221	220 Ω ±5% 1W
⚠ R732	4822 053 10221	220 Ω ±5% 1W
⚠ R733 ~ ⚠ R736	4822 052 10109	10 Ω ±5% 1/6W
⚠ R737	4822 116 82049	0.18 Ω x 2 ±10% 3W
⚠ R738	4822 116 82049	0.18 Ω x 2 ±10% 3W
⚠ R739	4822 050 26809	68 Ω ±5% 1/6W
⚠ R740	4822 050 26809	68 Ω ±5% 1/6W
⚠ R743	4822 053 10109	10 Ω ±5% 1W
⚠ R744	4822 053 10109	10 Ω ±5% 1W
⚠ R745	4822 053 10472	4.7K Ω ±5% 1W
⚠ R801	4822 117 10203	27 Ω ±5% 1/2W, Fusible (SR53)
⚠ R803	4822 053 10102	1K Ω ±5% 1W
⚠ R804	4822 116 82525	390 Ω ±5% 1/2W, Fusible (SR63)
	4822 116 81316	470 Ω ±5% 1/4W, Fusible (SR53)
⚠ R807	4822 116 60306	1 Ω ±5% 1/4W, Fusible (SR63)
	4822 116 60307	1 Ω ±5% 1/4W, Fusible (SR53)
⚠ R810	4822 116 60306	1 Ω ±5% 1/2W, Fusible (SR63)
	4822 116 60307	1 Ω ±5% 1/4W, Fusible (SR53)

REF. DESIG.	PART NO.	DESCRIPTION
		PV04-SEMICONDUCTORS
DL01	4822 130 33305	Diode 1SS176, etc. (SR63)
DL02	4822 130 33305	Diode 1SS176, etc. (SR63)
DL03	4822 130 33305	Diode 1SS176, etc. (SR63)
DN01	4822 130 80837	Diode HSS81TD (SR63)
	4822 130 33305	Diode 1SS176, etc. (SR53)
DN02	4822 130 80837	Diode HSS81TD (SR63)
	4822 130 33305	Diode 1SS176, etc. (SR53)
DN03	4822 130 33305	Diode 1SS176, etc.
D701	4822 130 80273	Zener RD8.2JB2/MTZJ8.2C
D702	4822 130 80322	Zener RD15JB3/MTZJ15A
D703 ~ D706	4822 130 33305	Diode 1SS176, etc.
⚠ D801	4822 130 80839	Diode S5688G
⚠ D803	4822 130 80839	Diode S5688G
⚠ D805	4822 130 80839	Diode S5688G
⚠ D807	4822 130 80839	Diode S5688G
⚠ D808	4822 130 80837	Diode HSS81TD (SR63)
	4822 130 80839	Diode S5688G (SR53)
⚠ D809	4822 130 80837	Diode HSS81TD (SR63)
	4822 130 80839	Diode S5688G (SR53)
⚠ D810	4822 130 81287	Zener RD33FB2
⚠ D811	4822 130 80319	Zener RD9.1JB2/MTZJ9.1C
⚠ D812	4822 130 30984	Diode S5VB20 (SR63)
	4822 130 31007	Diode S4VB-20 (SR53)
D813	4822 130 33305	Diode 1SS176, etc.
⚠ D815	4822 130 80839	Diode S5688G
⚠ D816	4822 130 80839	Diode S5688G
D817	4822 130 80091	Zener RD12JB2/MTZJ12C
QE01	4822 130 42298	Transistor 2SC536SP, etc.
QE02	4822 130 42298	Transistor 2SC536SP, etc.
QE03	4822 209 73064	IC NJM2068DD
QL01	4822 209 73275	IC TC9214F (SR63)
QL02	4822 130 42298	Transistor 2SC536SP, etc. (SR63)
QL03	4822 130 42298	Transistor 2SC536SP, etc. (SR63)
QL04	4822 130 42594	Transistor, Digital DTC144ES (SR63)
QN01	4822 130 43233	Transistor 2SC2240 (GR, BL)
QN02	4822 130 43233	Transistor 2SC2240 (GR, BL)
QN03	4822 130 42951	Transistor 2SA970 (GR, BL)
QN04	4822 209 83312	IC TA7317P
QV01	4822 209 72748	IC LC7821
QV02	4822 209 73275	IC TC9214P
QV03	4822 209 73287	IC LB1630
Q401	4822 209 83631	IC NJM4558DD
Q701	4822 130 42951	Transistor 2SA970 (GR, BL)
Q702	4822 130 42951	Transistor 2SA970 (GR, BL)
Q703	4822 130 43233	Transistor 2SC2240 (GR, BL)
Q704	4822 130 43233	Transistor 2SC2240 (GR, BL)
Q705	4822 130 60117	Transistor 2SC3419 (Y)
Q706	4822 130 60117	Transistor 2SC3419 (Y)
Q707	4822 130 62335	Transistor 2SD2033 (E)
Q708	4822 130 62335	Transistor 2SD2033 (E)
Q709	4822 130 62334	Transistor 2SB1353 (E)
Q710	4822 130 62334	Transistor 2SB1353 (E)
⚠ Q711	4822 130 63433	Transistor 2SC4467 (O, P, Y) (SR63)
	4822 130 63429	Transistor 2SC4466 (O, P, Y) (SR53)
⚠ Q712	4822 130 63433	Transistor 2SC4467 (O, P, Y) (SR63)
	4822 130 63429	Transistor 2SC4466 (O, P, Y) (SR53)
⚠ Q713	4822 130 63432	Transistor 2SA1694 (O, P, Y) (SR63)
	4822 130 63428	Transistor 2SA1693 (O, P, Y) (SR53)
⚠ Q714	4822 130 63432	Transistor 2SA1694 (O, P, Y) (SR63)
	4822 130 63428	Transistor 2SA1693 (O, P, Y) (SR53)
Q715	4822 130 61892	Transistor 2SD2144S (U, V)
Q716	4822 130 61892	Transistor 2SD2144S (U, V)
Q717	4822 209 83732	IC AN7062P
Q718	4822 130 42594	Transistor, Digital DTC144ES
Q719	4822 130 42682	Transistor, Digital DTA144ES
⚠ Q801	4822 209 60826	IC NJM7812FA
⚠ Q802	4822 209 61533	IC NJM7806FA
Q804	4822 130 42298	Transistor 2SC536SP, etc.
Q805	4822 130 42298	Transistor 2SC536SP, etc.
Q806	4822 130 42682	Transistor, Digital DTA144ES
		PV04-MISCELLANEOUS
JL01	4822 265 30627	Terminal, 3P RCA (SR63)
JL02	4822 267 31208	Terminal, 2P RCA (SR63)
JV01	4822 265 30397	Terminal, 4P RCA
JV02	4822 265 30397	Terminal, 4P RCA
JV03	4822 265 30457	Terminal, 6P RCA
JV04	4822 266 30274	Terminal, 2P RCA
J401	4822 267 30741	Terminal, 2P RCA
LN01	4822 280 70354	Relay
L701	4822 157 63085	Coil, Speaker
L702	4822 157 63085	Coil, Speaker
SE01	4822 276 12926	Push Switch, Bass EQ
		PW54-SPEAKER TERMINAL CIRCUIT BOARD
CW57 ~ CW60	4822 122 30043	Ceramic Cap. 0.01µF +80% -20% 50V
JW51	4822 290 81628	Terminal, Speaker
JW52	4822 290 81629	Terminal, Speaker
		P104-FRONT-END/IF BLOCK CIRCUIT BOARD
		P104-CAPACITORS
CA01	4822 125 60185	Trimming 20pF
CA02	4822 122 30103	Ceramic 0.022µF +80% -20% 50V
CA03	4822 122 31823	Ceramic 15pF ±5% 50V
CA04	4822 122 31205	Ceramic 47pF ±5% 50V
CA05	4822 121 54128	Film 390pF ±5% 50V
CA06	4822 122 30043	Ceramic 0.01µF +80% -20% 50V
CA07	4822 122 30043	Ceramic 0.01µF +80% -20% 50V
CA08	4822 125 60185	Trimming 20pF
CA09	4822 125 31823	Ceramic 15pF ±5% 50V
CA11	4822 122 31349	Ceramic 68pF ±5% 50V
CA12	4822 122 10367	Ceramic 150pF ±5% 50V
CA13	4822 122 30043	Ceramic 0.01µF +80% -20% 50V
CA14	4822 122 30043	Ceramic 0.01µF +80% -20% 50V
CA16	4822 122 30103	Ceramic 0.022µF +80% -20% 50V
CA17	4822 124 23053	Elect 1µF 50V
CA18	4822 124 23053	Elect 1µF 50V
CA22	4822 122 30043	Ceramic 0.01µF +80% -20% 50V
CA23	4822 124 21741	Elect 3.3µF 25V
CA24	4822 122 30043	Ceramic 0.01µF +80% -20% 50V
C201	4822 122 30043	Ceramic 0.01µF +80% -20% 50V
C202	4822 122 30043	Ceramic 0.01µF +80% -20% 50V
C203	4822 122 30103	Ceramic 0.022µF +80% -20% 50V
C204	4822 122 30103	Ceramic 0.022µF +80% -20% 50V
C206	4822 122 30103	Ceramic 0.022µF +80% -20% 50V
C207	4822 124 41604	Elect 0.1µF 50V
C208	4822 124 23054	Elect 0.47µF 50V
C211	4822 122 30103	Ceramic 0.022µF +80% -20% 50V
C226	4822 124 21894	Elect 10µF 16V
C310	4822 121 41623	Film 1000pF ±5%

REF. DESIG.	PART NO.	DESCRIPTION
		P104-RESISTORS
R206	4822 116 82951	33K Ω ±5% 1/6W
R211	4822 100 11471	100K Ω, Trimming
R301	4822 100 11351	10K Ω, Trimming
		P104-SEMICONDUCTORS
DA01	4822 125 50416	Varicap SVC342
DA02	4822 130 33697	Diode 1SS135
DA03	4822 125 50416	Varicap SVC342
DA04	4822 130 33697	Diode 1SS135
DA05	4822 130 33305	Diode 1SS176, etc.
DA06	4822 130 33305	Diode 1SS176, etc.
QA01	4822 130 42298	Transistor 2SC536SP, etc.
QA02	4822 130 42298	Transistor 2SC536SP, etc.
QA03	4822 130 61892	Transistor 2SD2144S (U, V)
Q201	4822 209 71785	IC LA1266
Q202	4822 130 42082	Transistor 2SC1047 (C)
		P104-MISCELLANEOUS
A101	4822 210 10372	V. H. F. Tuner, FE415-G09
FA02	4822 242 71397	Ceramic Filter, SFP450H
F201	4822 242 71135	Ceramic Filter, SFE10.7MS3-A
F202	4822 242 71135	Ceramic Filter, SFE10.7MS3-A
J101	4822 266 30298	Terminal, Antenna
LA01	4822 157 63084	Ant Coil, MW
LA02	4822 157 52716	OSC Coil, MW
LA03	4822 157 52714	Ant Coil, LW
LA04	4822 157 52717	OSC Coil, LW
LA05	4822 157 53589	Choke Coil, 39mH
LA06	4822 148 81095	I. F. T. Coil, AM
L201	4822 157 62408	I. F. T. Coil, FM DET
L202	4822 157 62409	I. F. T. Coil, FM DET
		P304-MPX/PLL BLOCK CIRCUIT BOARD
		P304-CAPACITORS
CA15	4822 122 30043	Ceramic 0.01μF +80% -20% 50V
CA21	4822 122 31349	Ceramic 68pF ±5% 50V
C210	4822 122 31349	Ceramic 68pF ±5% 50V
C302	4822 124 21894	Elect 10μF 16V
C303	4822 124 41604	Elect 0.1μF 50V
C304	4822 124 41604	Elect 0.1μF 50V
C307	4822 124 41604	Elect 0.1μF 50V
C308	4822 124 23054	Elect 0.47μF 50V
C309	4822 124 23054	Elect 0.47μF 50V
C310	4822 121 50591	Film 1000pF ±5% 50V
C311	4822 124 21894	Elect 10μF 16V
C312	4822 124 21894	Elect 10μF 16V
C501	4822 122 31205	Ceramic 47pF ±5%
C502	4822 122 31205	Ceramic 47pF ±5%
C504	4822 122 30043	Ceramic 0.01μF +80% -20% 50V
C505	4822 124 41604	Elect 0.1μF 50V
C506	4822 124 23053	Elect 1μF 50V
C507	4822 122 30043	Ceramic 0.01μF +80% -20% 50V
C508	4822 122 30043	Ceramic 0.01μF +80% -20% 50V
		P304-RESISTORS
⚠ R210	4822 050 21501	150 Ω ±5% 1/4W
⚠ R311	4822 116 83929	220 Ω ±5% 1/4W
R314	4822 100 11373	4.7K Ω, Trimming
⚠ R514	4822 116 83929	220 Ω ±5% 1/4W

REF. DESIG.	PART NO.	DESCRIPTION
		P304-SEMICONDUCTORS
D301	4822 130 33305	Diode 1SS176, etc.
D501	4822 130 80317	Zener RD5.1JB2/MTZJ5.1B
QA04	4822 130 42682	Transistor, Digital DTA144ES
QA05	4822 130 42682	Transistor, Digital DTA144ES
QA06	4822 130 42682	Transistor, Digital DTA144ES
Q204	4822 130 42682	Transistor, Digital DTA144ES
Q301	4822 209 71776	IC TEA5581
Q501	4822 209 62557	IC LM7000N
Q502	4822 130 42298	Transistor 2SC536SP, etc.
Q503	4822 130 42121	F. E. T. 2SK30A (Y)
Q504	4822 130 42298	Transistor 2SC536SP, etc.
		P304-MISCELLANEOUS
X501	4822 242 72333	Crystal, 7.2MHz
		P904-POWER SW./B-UP TRANSF. CIRCUIT BOARD
⚠ C901	4822 122 33276	Ceramic Cap. 0.01μF ±20%
⚠ C904	4822 122 33276	Ceramic Cap. 0.01μF ±20%
D904	4822 130 33305	Diode 1SS176, etc.
⚠ R902	4822 053 10122	Resistor 1.2K Ω ±5% 1W (SR63)
	4822 053 10102	Resistor 1K Ω ±5% 1W (SR53)
⚠ Q902	4822 130 43312	Transistor 2SC3312 (SR63)
	4822 130 60839	Transistor 2SC2458 (SR53)
⚠ L902	4822 280 20534	Relay G5P-1
⚠ F901	4822 070 31252	Fuse T1.25A 250V (SR63) [/02B/02G]
	4822 070 31002	Fuse 1.0A 250V (SR53) [/02B/02G]
⚠ S901	4822 276 13285	Push Switch, Power

NOTE ON SAFETY :
Symbol ⚠ Fire or electrical shock hazard. Only original parts should be used to replace any part marked with symbol ⚠ . Any other component substitution (other than original type), may increase risk of fire or electrical shock hazard.